



Louisville Metro Air Pollution Control District
701 West Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137



March 31, 2020

**Federally-Enforceable District-Origin Operating Permit
(FEDOOP)
Statement of Basis**

Source: IMI South, LLC - South
1440 Selinda Avenue
Louisville, KY 40213

Owner: IMI South, LLC
1440 Selinda Avenue
Louisville, KY 40213

Application Documents: See Table I-9

Draft Permit: 02/28/2020

Permitting Engineer: Aaron DeWitt

Permit Number: O-0182-20-F

Plant ID: 0182

SIC: 3273

NAICS: 327320

Introduction:

This permit will be issued pursuant to District Regulation 2.17- Federally Enforceable District Origin Operating Permits. Its purpose is to limit the plant wide potential emission rates from this source to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements.

Permit renewal and deleting references to greenhouse gasses in General Condition G10.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO₂), carbon monoxide (CO), particulate matter less than 10 microns (PM₁₀), and particulate matter less than 2.5 microns (PM_{2.5}). Jefferson County is classified as a nonattainment area for ozone (O₃). This facility is located in the portion of Jefferson County that is an attainment area for sulfur dioxide (SO₂).

Permit Application Type:

☐ Initial issuance

Permit Revision

☒ Permit renewal

☐ Administrative

☐ Minor

☐ Significant

Compliance Summary:

☐ Compliance certification signed

☐ Compliance schedule included

☐ Source is out of compliance

☒ Source is operating in compliance

I Source Information

1. Product Description:

IMI South, LLC - Selinda is a central mix (wet) ready mix concrete production facility, consisting of one (1) central mix (wet) ready mix concrete batch plant.

2. Process Description:

At the central ready mix plant, the dry components of ready mix concrete (cement, flyash, sand, and aggregate) are measured and loaded with water into a central mixer that discharges the wet mix concrete into ready mix concrete transit trucks and it is transported to offsite delivery locations.

3. Site Determination:

There are no other facilities that are contiguous or adjacent to this facility.

4. Emission Unit Summary:

Emission Unit	Equipment Description
U1	One (1) Erie-Strayer central mix (wet) ready mix concrete batch plant, model #7265, with two (2) cement silos/bins, two (2) flyash silos/bins, two (2) outside aggregate/sand conveyors in series for loading overhead aggregate/sand bins, and Stephens baghouse, model SOS6100 central dust collection system.
IA1	Tanks
IA2	Indirect-fired heat boiler

5. Fugitive Sources:

The fugitive sources identified by the source are uncontrolled portions of the ready-mix concrete unit.

6. Permit Revisions:

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
O-0182-14-F	01/16/2015	02/17/2015	Initial	Initial issuance
O-0182-20-F	02/28/2020	03/31/2020	Renew	Permit renewal, update format, removed greenhouse gas limit from general condition 10

7. Construction Permit History:

Permit No.	Effective Date	Description
232-72-C	07/27/1972	Operation of concrete batch plant, reference 233-72-O
305-73-C	03/27/1973	Installation of dust collector, replaces collector in permit 237-72-O
150-84-C	08/30/1984	Four (4) bag filters servicing the cement silo, the flyash silo, the batcher, and the mixer
149-84-C	08/30/1984	Concrete batching operation
30-86-C	03/31/1986	Concrete batch plant, Heltzel, model no. 900 C
31-86-C	03/31/1986	Two (2) baghouses, Stephens, model SV-170
92-86-C	05/30/1986	Pneumatic conveying system to convey cement
93-86-C	05/30/1986	Pneumatic conveying system to convey flyash
71-88-C	09/01/1987	Installation of dust collector for cement transfer
72-88-C	09/01/1987	Baghouse, Stephens, model SV-170 for flyash transfer
494-91-C	10/16/1991	Baghouse, Stephens, model SU-45 for dust capture from Besser mixer
99-92-C	02/17/1992	Concrete batch plant, Heltzel 900C
100-92-C	02/17/1992	Two (2) baghouses, Stephens, model SV-170. One (1) baghouse, Dusty Dustless 36I
264-03-C	07/30/2003	Cartridge filter dust collector, Stephens, model SOS6100
221-06-C	07/31/2006	Operation consisting of transporting aggregate by rail via a conveyor to a truck

8. Application and Related Documents

Document Number	Date	Description
119585	09/30/2019	District email reminder of expiring permits, 60 days until applications due
126073	12/10/2019	District email requesting overdue application for permit renewal
126160	12/12/2019	IMI application question
126262	12/12/2019	District response
126161	12/12/2019	IMI application question
126162	12/12/2019	District response
126163	12/12/2019	IMI application question
126164	12/12/2019	District response, new applications required
126246	12/13/2019	IMI submitted applications via email

9. Emission Summary

Pollutant (ton/yr)	CO	NO _x	SO ₂	PM ₁₀	VOC	Total HAP	Single HAP
Actual Emissions 2012	0	0.04	0.06	0.49	0.002	0.008	0.005
Major source trigger (based on PTE)	No	No	No	Yes	No	No	No

10. Applicable Requirements

☐ 40 CFR 60 ☒ SIP ☐ 40 CFR 63
☐ 40 CFR 61 ☒ District Origin ☐ Other

11. Referenced Federal Regulations:

The source has no federal requirements.

12. Non-Applicable Regulations:

None

II Regulatory Analysis

1. Stratospheric Ozone Protection Requirements:

Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. IMI South, LLC - Selinda does not manufacture, sell, or distribute any of the listed chemicals. The source's use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.

2. Basis of Regulation Applicability

a. Applicable Regulations

Regulation	Title	Basis
1.14	Control of Fugitive Particulate Emissions	Regulation 1.14 establishes standards for fugitive dust sources.
2.17	Federally Enforceable District Origin Operating Permit	Regulation 2.17 establishes Federally Enforceable District Origin Operating Permits
6.09	Standards of Performance for Existing Process Operations	Regulation 6.09 establishes the requirements for PM emissions from existing processes that commenced construction before September 1, 1976.
7.08	Standards of Performance for New Process Operations	Regulation 7.08 establishes the requirements for PM emissions from new processes that commence construction after September 1, 1976.

b. Plantwide

IMI South, LLC - Selinda is potentially major for PM₁₀. Regulation 2.17 – *Federally Enforceable District Origin Operating Permits* establishes requirements to limit the plant wide potential emission rates to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements. The source requested limits of the PM₁₀ less than 25 tons per year, to be classified as a synthetic minor (FEDDOOP) source.

Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards. IMI South, LLC - Selinda has requested emission limits of less than 25 tons per year for all regulated air pollutants, less than 12.5 tons/year for total HAPs and less than 5 tons per year for each individual HAP to be

considered exempt from local TAC (STAR) regulations, as defined by Regulation 5.00, section 1.13.5.

Regulation 2.17, section 5.2, requires monitoring and record keeping to assure ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a minimum of 5 years and make the records readily available to the district upon request.

Regulation 2.17, section 7.2, requires stationary sources for which a FEDOOP is issued to submit an Annual Compliance Certification by April 15, of the following calendar year. In addition, as required by Regulation 2.17, section 5.2, the source shall submit regular reports to show compliance with the permit. Compliance reports and compliance certifications shall be signed by a responsible official and shall include a certification statement per Regulation 2.1. The compliance reports are due within 60 days of the end of the reporting period:

<u>Reporting Period</u>	<u>Report Due Date</u>
January 1 - June 30	August 29
July 1 - December 31	March 1 of the following year

c. Emission Unit U1 – Central mix (wet) ready mix concrete batch plant

EP	Description	Applicable Regulations
E1	Cement silo #001, capacity 100 ton	7.08
E2	Cement silo #002, capacity 100 ton	
E3	Flyash silo #003, capacity 100 ton	
E4	Flyash silo #004, capacity 100 ton	
E5	Aggregate/sand weigh hopper, capacity 412 ton/hr	6.09
E6	Cement/flyash weigh hopper, capacity 70.5 ton/hr	
E7	Mixer loading, capacity 500 ton/hr	
E8	Aggregate stockpiles	1.14
E9	Sand stockpiles	
E10	Aggregate/sand handling	
E11	Aggregate/sand transfer conveyor, capacity 412 ton/hr	
E12	Aggregate/sand bins, capacity 412 ton/hr	
E14	Two aggregate/sand bins loading conveyor, capacity 240 ton/hr	1.14

EP	Description	Applicable Regulations
E15	Aggregate/sand conveyor loading hopper, capacity 240 ton/hr	
C1	Central dust collection system Stephens, model SOS6100, capacity 8,000 cfm	

i. Standards

(1) Opacity

- (a) Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%, for processes that commenced construction after September 1, 1976.
- (b) Regulation 6.09, section 3.1, establishes an opacity standard of less than 20%, for processes in existence or having a construction permit issued on or before September 1, 1976.

(2) PM/PM₁₀

- (a) Regulation 1.14, section 2.1, requires the source to take precautions to prevent particulate matter from becoming airborne beyond the work site for emission points E8, E9, E10, E11, E12, E14, and E15.
- (b) Construction permit 264-03-C limits the emissions of the pollutant PM from the batch plant to less than 32.52 pounds per hour for E1, E2, E3, and E4.
- (c) Construction permit 264-03-C had a 27.38 ton per year limit that can't be exceeded with the STAR exempt limit of less than 25 tons per year requested by the source to avoid STAR.
- (d) For emission points with a throughput greater than 30 ton/hr and commenced construction after September 1, 1976:

The emission standard for PM at each emission point with a process throughput greater than 30 ton/hr is determined in accordance with Regulation 7.08, section 3.1.2 as follows:

$$\text{PM lb/hr limit} = 17.31 (\text{process weight ton/hr})^{0.16}$$

- (e) The emission standard for PM at each emission point with a process throughput greater than 30 ton/hr, and in existence or having a construction permit issued prior to September 1, 1976, is

determined in accordance with Regulation 6.09, section 3.2 as follows:

$$\text{PM lb/hr limit} = 55 (\text{process weight ton/hr})^{0.11-40}$$

III Other Requirements

1. Temporary Sources:

The source did not request to operate any temporary facilities.

2. Short Term Activities:

The source did not report any short term activities.

3. Emissions Trading:

The source is not subject to emission trading.

4. Alternative Operating Scenarios:

The source did not request any alternative operating scenarios.

5. Compliance History:

Date	Regulation Violated	Settlement
04/07/1993	Reg. 1.14, section 2.1	Agreement with fine
04/18/1994	Reg. 1.14, section 2.1	Agreement with fine
04/25/1994	Reg. 1.14, section 2.1	Agreement with fine

6. Calculation Methodology or Other Approved Method:

Concrete Batch Plants (U1): Emission factors from AP-42, Chapter 11.12, Concrete Batching, were used to determine Potential to Emit and confirm limits requested by the source.

Table 1 AP-42 Controlled Emission Factors

Equipment	AP-42 Emission Factor, Controlled lb PM ₁₀ /ton	Controlled PM ₁₀ Emission Factor converted to lb PM ₁₀ /yd ³ dry concrete
Aggregate Transfer	0.0033	0.0031
Sand Transfer	0.00099	0.0007
Weigh hopper (Agg+Sand) ^a	0.00014	0.00023
Mixer loading (cement+flyash) ^b	0.0055	0.0016
Cement silo filling	0.00034	0.00008
Flyash silo filling	0.0049	0.0002
Aggregate ground storage	N/A	0.0031
Sand ground storage	N/A	0.0007

Equipment	AP-42 Emission Factor, Controlled lb PM₁₀/ton	Controlled PM₁₀ Emission Factor converted to lb PM₁₀/yd³ dry concrete
Aggregate hopper loading	N/A	0.0031
Sand hopper loading	N/A	0.0007

Table 2 AP-42 Uncontrolled Emission Factors

Equipment	AP-42 Emission Factor, Uncontrolled lb PM₁₀/ton	Uncontrolled PM₁₀ Emission Factor converted to lb PM₁₀/yd³ dry concrete
Aggregate Transfer	0.0033	0.0031
Sand Transfer	0.00099	0.0007
Weigh hopper (Agg+Sand) ^a	0.0028	0.0046
Mixer loading (cement+flyash) ^b	0.156	0.044
Cement silo filling	0.47	0.1152
Flyash silo filling	1.10	0.0402
Aggregate ground storage	N/A	0.0031
Sand ground storage	N/A	0.0007
Aggregate hopper loading	N/A	0.0031
Sand hopper loading	N/A	0.0007

^a The unit for weigh hopper emission factor is lb of pollutant per ton of aggregate and sand, AP-42, table 11.12-2, footnote e.

^b The unit for central mixer loading emission factor is lb of pollutant per ton of cement and flyash, AP-42, table 11.12-2, footnote f.

Table 3 AP-42 Controlled Emission Factors

Equipment	AP-42 Emission Factor, Controlled lb PM/ton	Controlled PM Emission Factor converted to lb PM/yd³ dry concrete
Aggregate Transfer	0.0069	0.0063
Sand Transfer	0.00021	0.0015
Weigh hopper (Agg+Sand) ^a	0.00024	0.0004
Mixer loading (cem+cem suppl) ^b	0.0184	0.0052
Cement silo filling	0.00099	0.00024
Flyash silo filling	0.0089	0.0003
Aggregate ground storage	N/A	0.0064
Sand ground storage	N/A	0.0015
Aggregate hopper loading	N/A	0.0064
Sand hopper loading	N/A	0.0015

Table 4 AP-42 Uncontrolled Emission Factors

Equipment	AP-42 Emission Factor, Uncontrolled lb PM/ton	Uncontrolled PM Emission Factor converted to lb PM/yd³ dry concrete
Aggregate Transfer	0.0069	0.0063
Sand Transfer	0.00021	0.0015
Weigh hopper (Agg+Sand) ^a	0.0048	0.0079
Mixer loading (cement+flyash) ^b	0.572	0.161
Cement silo filling	0.73	0.179
Flyash silo filling	3.14	0.116
Aggregate ground storage	N/A	0.0064
Sand ground storage	N/A	0.0015
Aggregate hopper loading	N/A	0.0064
Sand hopper loading	N/A	0.0015

^a The unit for weigh hopper emission factor is lb of pollutant per ton of aggregate and sand, AP-42, table 11.12-2, footnote e.

^b The unit for central mixer loading emission factor is lb of pollutant per ton of cement and flyash, AP-42, table 11.12-2, footnote f.

7. Insignificant Activities

Equipment	Qty	PTE (ton/yr)	Regulation Basis
Tanks for storage of lubricating or fuel oils, vapor pressure < 10 mmHg @ 20 °C and 760 mmHg. (See unit IA1 – Tanks T1 thru T4)	4	0.03 VOC	Reg. 1.02, Appendix A
3.3 MMBtu/hr natural gas fueled water heater (See unit IA2 – Indirect-fired Heat Boiler)	1	1.42 NO _x	Reg. 1.02, Appendix A
Brazing, soldering or welding equipment	1	0.41 PM	Reg. 1.02, Appendix A
Waste oil heater	1	0.38 SO ₂	Reg. 1.02, section 1.38

1. Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements.
2. Insignificant activities identified in District Regulation 1.02, Appendix A, shall comply with generally applicable requirements.
3. The owner or operator shall annually submit an updated list of insignificant activities that occurred during the preceding year, with the compliance certification due April 15th.

4. Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.
5. The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions, or use Potential to Emit (PTE) as the annual emissions for each piece of equipment.
6. The District has determined that no monitoring, recordkeeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) unit.

8. Equipment Not Regulated

Emission Point	Description
IA Tanks	Four (4) VOC storage tanks, each with a maximum capacity of 250 gallons or less, for storing engine oil, gear oil, hydraulic oil, and transmission fluid
E13	Roads & Yard ¹

9. IA Emission Units with Applicable Regulations

a. Emission Unit IA1 – Tanks

i. Equipment

EP	Description	Applicable Regulations
T1	19,000-gallon tank, used for diesel fuel	7.12
T2	500-gallon tank, make Hoover Containment Inc., model M-643824	7.12
T3	1,000-gallon tank	7.12
T4	500-gallon tank	7.12

ii. Standards and Operation Limits

(1) VOC

- (a) Regulation 7.12, section 3.3 requires submerged fill if the materials have an as stored vapor pressure of 1.5 psia or greater.

¹ IMI South, LLC – Selinda is not one of the 28 source categories where roads and yards have standards.

- (b) Regulation 7.12 applies due to the size of the tanks, however, since the vapor pressure as stored is less than 1.5 psia there are no applicable emission or equipment standards.

b. Emission Unit IA2 – Indirect-fired Heat Boiler

EP	Description	Applicable Regulations
E16	Indirect-fired heat natural gas boiler, make Williams & Davis, model 777, capacity 3.3 MMBtu/hr	7.06

i. Standards and Operation Limits

(1) Opacity

- (a) Regulation 7.06, section 4.2 applies to the boiler. The District has determined that using a natural gas fired boiler will inherently meet the 20% opacity standard. Therefore, the company is not required to perform periodic monitoring to demonstrate compliance with the opacity standard.

(2) PM

- (a) In accordance with Regulation 7.06, section 4.1.1, PM emissions are limited to 0.56 pounds per million Btu actual total heat input for Emission Point E16.

A one-time PM and SO₂ compliance demonstration has been performed for the boilers, using AP-42 emission factors and combusting natural gas, and the emission standards cannot be exceeded. Therefore, there are no monitoring, record keeping, and reporting requirements for this boiler with respect to PM and SO₂ emission limits.

(3) SO₂

- (a) In accordance with Regulation 7.06, section 5.1.1, SO₂ emissions are limited to 1.0 pounds per million Btu actual total heat input for Emission Point E16 because the total heat input capacity is less than 145 million Btu per hour.

A one-time PM and SO₂ compliance demonstration has been performed for the boilers, using AP-42 emission factors and combusting natural gas, and the emission

standards cannot be exceeded. Therefore, there are no monitoring, record keeping, and reporting requirements for this boiler with respect to PM and SO₂ emission limits.